Attachment J11

Fort Story Potable Water System

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J11 Fort Story Water System

J11.1 Fort Story Overview

Fort Story, named for General Patton Story, a well noted artilleryman, is located on Cape Henry, Virginia and is bounded by the Chesapeake Bay and the Atlantic Ocean. During World War I, Fort Story was made a part of the coastal defense group along with Fort Monroe and Fort Wool. Then in 1925, Fort Story became a designated harbor defense command. As World War II drew nearer, Fort Story went on to become the immediate headquarters of the Harbor Defense Command which was originally based at Fort Monroe. In 1944, Fort Story slowly transformed its position as Harbor Headquarters to a recovery hospital for returning World War II veterans. In 1946, by the end of World War II, Fort Story redefined its mission by becoming an amphibious training base. By 1962, Fort Story was declared a Class I sub-installation of Fort Eustis. Today, its 1451 acre territory is primarily used as a "LOTS" training facility, which is also known as Logistics-Over-The -Shore. It supports approximately 3,000 soldiers, sailors, marine personnel, retirees and military family members.

J11.2 Water System Description

The Fort Story potable water system comprises all appurtenances physically connected to the system from the point in which the Government ownership currently starts to the point of demarcation defined by the real estate instruments. Generally, the point of demarcation will be the building footprint. The system may include, but is not limited to the storage tanks and the distribution lines including service laterals. The following description and inventory is included to provide the Offeror with a general understanding of the size and configuration of the distribution system. The inventory is assumed to be approximately 90 percent complete. The Offeror shall base the proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description. Under no circumstances shall the successful Contractor be entitled to any rate adjustments based on the accuracy of the following description and inventory.

J11.2.1 Water System Fixed Equipment Inventory

Fort Story is supplied potable water by the City of Norfolk at two metered delivery points, located at the east and west gates, along Atlantic Avenue. Through an Inter-Service Support Agreement, the Army owns the system and the Navy provides water service to the Army facilities, under a stabilized rate plan, and maintains the Fort Story water distribution system. The Navy has a water supply contract with the City of Norfolk and also a wheeling agreement with the City of Virginia Beach to wheel City of Norfolk water through the City of Virginia Beach's lines.

Each delivery point is equipped with meters and check valve. The meters are not included in this Inventory Report. The water distribution system delivering water to Fort Story is owned and maintained by the City of Virginia Beach. The meters are owned and maintained by the city of Norfolk.

System Storage

Potable water is stored in one 600,000 gallon elevated storage tank, facility 834, which was installed in 1993. DPW reports that the water pressure from the City of Virginia Beach is so good that it does not allow the water tank to draw down. It is necessary to manually close the supply valves in order to draw water from the water tank. Fort Story received approval from the Virginia Department of Health in FY2000 to install a circulating pump system at the water tank. The design of the circulating pump system is complete and is being approved for installation in FY2001. The Contractor will be required to maintain and operate this pumping system.

The water tower is equipped with a low water alarm monitoring system and cathodic protection, which are checked two times per year.

Distribution System

The distribution system at Fort Story comprises ductile pipe, polyvinyl chloride pipe (PVC) and some asbestos cement pipe (ACP). The water distribution system was initially installed in 1917, when Fort Story was built. Since that time there have been a number of additions and upgrades to the system. In 1993 an upgrade of the water distribution system was completed. This upgrade replaced existing mains and added new mains throughout the installation. The details of this project are provided in Table 6. DPW estimates that 75% of the water pipes are ductile iron, 20% PVC and 5% or less, asbestos cement.

The fire hydrants are flushed regularly, with the fire department performing regular flow testing.

Bacteriological Monitoring Program and Sampling Locations

In accordance with Virginia Department of Health Waterworks Regulations, 12 VAC 5-590-370, the waterworks owner shall collect total coliform samples at sites that are representative of water throughout the distribution system according to a written sample siting report, either established or approved by the commissioner of the Virginia Department of Health. Fort Story has established a bacteriological monitoring program for the on-post water distribution system. Six sampling locations have been established. The monitoring program requires that three of these locations be sampled on rotation each month. Detailed information on the monitoring program and a map of the sampling locations will be available in the technical library.

J11.2.1.2 Inventory

Table 1 provides a general listing of the major water system fixed assets for the Fort Story water system included in the purchase. The system will be sold in a "as is, where is" condition without any warranty, representation, or obligation on the part of Government to make any alterations, repairs, or improvements. Ancillary equipment attached to, and necessary for, operating the system, though not specifically mentioned herein, is considered part of the purchased utility.

TABLE 1
1. Fixed Inventory
Water Distribution System Fort Story

Item	Size	Quantity	Unit	Approximate Year of Construction
Pipe	Less than 2" *	405	Linear Feet	Various
	2"	3,962	Linear Feet	Various
	3"	1,449	Linear Feet	Various
	4"	4,964	Linear Feet	Various
	6"	53,503	Linear Feet	Various
	8"	20,239	Linear Feet	Various

Item	Size	Quantity	Unit	Approximate Year of Construction
	10”	28,233	Linear Feet	Various
	12”	6,774	Linear Feet	Various
Subtotal		119,529		
Building Services		376	Each	Various
Air Relief Valves		9		
Main Valves	6” & larger	165	Each	Various
Hydrants		162	Each	Various
Storage Tank	600,000	1	Gallons	1989
Water meters in Table 5 except 4 on entrance mains	Various	6	Each	Various

* Building service lines are not included in this length.

J11.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools Inventory

Table 2 lists other ancillary equipment (spare parts) and Table 3 lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment and tools. The successful Contractor shall provide any and all equipment, vehicles, and tools, whether included in the purchase or not, to maintain a fully operating system under the terms of this contract.

TABLE 2
2. Spare Parts
Water Distribution System Fort Story

Qty	Item	Make/Model	Description	Remarks
No spare parts for maintenance of the Fort Story water distribution system will be available to the new owner of the system. The Army does not maintain an inventory of spare parts for the system. The Fort Story water distribution system is currently being operated and maintained by the Navy Public Works Center (PWC) of Norfolk, VA, through an Interservice Support Agreement with Fort Eustis.				

TABLE 3
3. Specialized Equipment and Vehicles
Water Distribution System Fort Story

Description	Quantity	Location	Maker
No specialized equipment or vehicles for maintenance of the Fort Story water distribution system will be available to the new owner of the system. The Fort Story water distribution system is currently being operated and maintained by the Navy Public Works Center (PWC) of Norfolk, VA, through an Interservice Support Agreement with Fort Eustis.			

J11.2.3 Water System Manuals, Drawings, and Records Inventory

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4

4. Manuals, Drawings, and Records
Water Distribution System Fort Story

Qty	Item	Description	Remarks
No manuals, drawings, and records for installed equipment are available for transfer to the new owner of the system. All available construction ("as built") drawings and system maps of the system will be provided to the new owner during the transition period. System maps will be available in the technical library.			

J11.3 Current Service Arrangement

The Army owned water system at Fort Story receives water from the City of Norfolk, Virginia, through piping owned by the city of Virginia Beach.

J11.4 Secondary Metering

The Installation requires secondary meters for internal billings of their reimbursable customers, utility usage management, and energy conservation monitoring. The Contractor shall assume full ownership and responsibility for existing and future secondary meters IAW Paragraph C.3.

J11.4.1 Existing Secondary Meters

TABLE 5
5. Existing Secondary Meters
Water Distribution System Fort Story

BLDG N0.	METER TYPE	ADDRESS	OCCUPANT	LOCATION
East Gate A	Water			
East Gate B	Water			
West Gate A	Water			
West Gate B	Water			
300 Hsg	Water			
400 Hsg	Water			
593	Water			
606	Water	604 Hospital Rd	MWR Car Wash	
821	Water			
1004	Water	1004 Hospital Rd	Auto Craft Shop	

J11.5 Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. Invoicing (IAW paragraph G.2) for the previous month's services. The Contractor's invoice shall be prepared in a format proposed by the Contractor and accepted by the Contracting Officer.
2. Monthly Service Interruption Report for the previous month.
3. Meter Reading Report in support of internal billings, water usage management, and monitoring.
4. System Efficiency Report. If required by Paragraph C.3 the Contractor shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer.

J11.6 Energy Savings and System Improvement Projects

IAW paragraph C.3, Utility Service Requirement, the following projects have been implemented by the Government for system monitoring and control, energy conservation, and system improvement purposes:

Fort Story is currently installing a Utility Monitoring and Control System (UMCS). The UMCS will be used to monitor and, in some cases, control the on-post utility systems. It will be connected to components of each of the utility systems. The UMCS may be used to monitor the water distribution system. The Contractor will be required to cooperate with UMCS operation at no cost to the government by allowing continued connection to the utility components and connection to existing and new components when required for support of UMCS monitoring operation. Detailed information on the UMCS and its operation will be available in the technical library.
The pipe listed in Table 6 below was installed in 1993.

TABLE 6
6. Water Pipe and Water Tank Replacement
Potable Water Distribution System Fort Story

Year	Item	Quantity	Description	Work Type	Description	Cost
1993	6” Pipe	614LF	Ductile Iron*	New Pipe	Distribution	$23,077
1993	8” Pipe	6,940LF	Ductile Iron*	New Pipe	Distribution	260,842
1993	10” Pipe	13,274LF	Ductile Iron*	New Pipe	Distribution	498,908
1993	12” Pipe	2,900LF	Ductile Iron*	New Pipe	Distribution	108,997
1993	Water Tank	600Kgal	Elevated Tank	New Tank	Storage	691,748
TOTAL COST						$1,583,572.00
Note: 43 new fire hydrants were installed in the distribution piping listed above.						
* Material is ductile iron, bituminous coated, cement mortar lined, encased in 8-mil polyethylene.						

J11.7 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Fort Story boundaries.

J11.8 Off-Installation Sites

There are no off-installation sites associated with this scope.

J11.9 Specific Transition Requirements

IAW Paragraph C.13, Operational Transition Plan, **Table 7** lists service connections and disconnections required upon transfer, and **Table 8** lists the improvement projects required upon transfer of the Fort Story water system.

TABLE 7
7. Service Connections and Disconnections
Water System

Location	Description

Location	Description
None Identified as of the beginning of FY01. A list of service connections and disconnections for the ten-year period from FY91 through FY00 is available in the technical library. Required service connections and disconnections will be provided to the Contractor as the requirements become known.	

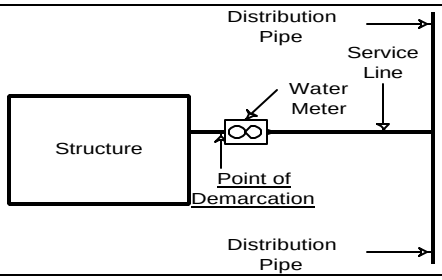
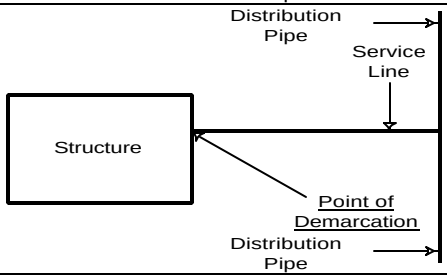
TABLE 8
8. System Improvement Projects
Water System

Project Location	Project Description
None Identified at the beginning of FY01.	

J11.10 Potable Water System Points of Demarcation

The point of demarcation is defined as the point on the piping system where ownership changes from the Grantee to the building owner. Table 9 below identifies the general locations of these points with respect to the building served. During the operation and maintenance transition period, concurrence on specific demarcation points will be documented during the joint inventory of facilities.

TABLE 9
9. Points of Demarcation
Water Distribution System Fort Story

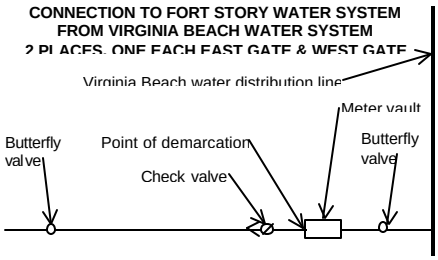
Point of Demarcation	Applicable Scenario	Sketch
Water Meter or Backflow Device, or Valve (closest apparatus to the exterior of the structure)	Water meter, backflow device, or valve is located on the service line entering the structure within 25 feet of the exterior of the structure.	
Point where the service line enters the structure	No water meter, backflow device, or valve exists on the service line entering the structure.	

J11.11 Unique Points of Demarcation

Table 10 below lists anomalous points of demarcation that do not fit any of the above categories.

TABLE 10
10. Unique Points of Demarcation
Water Distribution System Fort Story

Point of Demarcation	Applicable Scenario	Sketch

Point of Demarcation	Applicable Scenario	Sketch
Downstream side of the water meter vault.	Water service to Fort Story from the Virginia Beach municipal water system is at two places, one at East Gate and one at West Gate. Water meters are owned by City of Norfolk.	

J11.12 Plants and Tanks

TABLE 11
11. Plants and Tanks
Water Distribution System Fort Story

Description	Facility Number	State Coordinates	Other Information
Elevated Water Tank	834	X – 12208507.310000 Y – 3505064.130000	600Kgal capacity
Note: No land is being transferred with the Fort Story Water System.			

J11.13 Antennas on Elevated Water Tanks

The installation reserves the exclusive right to use elevated water tanks to support communications antennas and associated equipment at no cost to the government. The tanks will be used by the installation to support existing antennas and new antennas as needed. Any antenna or electronic equipment to be installed on the water tanks by the Grantee, or by others through agreements with the Grantee, must be approved by the installation and must be compatible with the installation's antenna systems. The installation's antennas will always have primacy should there be compatibility conflicts between antennas.